

# Laparoscopic Management of Ureteral Endometriosis and Hydronephrosis Associated With Endometriosis.

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## Abstract

**STUDY OBJECTIVE:** To evaluate if laparoscopic treatment of ureteral endometriosis is feasible, safe, and effective and to determine if ureteral dilatation and/or the number of incisions increases complications.

**DESIGN:** An institutional review board-approved retrospective cohort study of consecutive patients who underwent surgery for deep infiltrating endometriosis involving the ureter with hydronephrosis (Canadian Task Force classification III).

**SETTING:** A university hospital.

**PATIENTS:** Of 658 patients who had surgery for deep infiltrating endometriosis between November 2004 and December 2013, 198 of the 658 patients had ureteral endometriosis and required ureterolysis, and 28 of the 198 patients were identified with ureteral dilatation and hydronephrosis associated with endometriosis.

**INTERVENTIONS:** Of these 28 cases, 15 ureterolyses, 12 reanastomoses, and 1 reimplantation were performed.

**MEASUREMENTS AND MAIN RESULTS:** Medical, operative, and pathological data on the evolution of pain, urinary complaints, fertility, complications, and recurrences were collected from clinical records. Additionally, telephone interviews were performed for the follow-up of long-term outcomes. All 28 patients had concomitant surgical procedures because of endometriosis elsewhere in the pelvis or abdomen; 12 (42.9%) underwent surgery of the bowel, whereas 5 (17.9%) had bladder surgery. The evolution of pain after surgery showed a positive response (mean dysmenorrhea evaluation measured by the Numeric Pain Rating Scale from 0-10 preoperatively at the short-term follow-up and the long-term follow-up: 7.25-1.73 and 0.25, respectively). Three complications were noted in the group of 28 patients with ureterohydronephrosis; 1 required surgical reintervention. Logistic regression analyses found vaginal incision (odds ratio = 2.08; 95% CI 0.92-4.73), bladder incision (odds ratio = 8.77; 95% CI 3.25-23.63), number of incisions (odds ratio = 2.12; 95% CI 1.29-3.47), and number of previous surgeries (odds ratio = 1.26; 95% CI 0.93-1.71) as independent risk factors for complications in the group of 198 patients. Three patients underwent reoperation in the group of 28 patients: 1 for ureterovaginal fistula, 1 for persistent ureter dilatation and hydronephrosis, and 1 for persistent pain.

**CONCLUSION:** Laparoscopically assisted ureterolyses, ureteral reanastomoses, and ureteral reimplantation are feasible, safe, and effective treatments for ureteral endometriosis. Complete laparoscopic excision is possible with minimal complications, which seem to be associated with the number of incisions. Ureteral endometriosis should be suspected in all cases of deep infiltrating endometriosis.